

IN THE CLAIMS:

Please amend Claims 1, 18 and 29 as follows.

1. (Currently Amended) A user interface apparatus comprising:

a first sensor attached to a ~~first portion of a body~~ head of a user, ~~wherein the first portion is a head and wherein~~ said first sensor detects a position and an orientation of the head;

a second sensor attached to a second portion of the user, which is different from the ~~first portion~~ head;

an estimating unit arranged to estimate a relative position of the second portion with respect to the position and orientation of the head ~~first portion~~ in accordance with results of detection by said first and second sensors, wherein said estimating unit determines the relative position by transforming coordinates between a head coordinate system that is based on the position and orientation of the head detected by said first sensor and another coordinate system that is based on information detected by said second sensor;

a generation unit arranged to generate action command information on the basis of a transition of the estimated relative position; and

~~a determination unit arranged to determine an instruction by the user corresponding to the generated action information; and~~

an image generating unit arranged to generate an image on the basis of said user instruction command information.

2. (Cancelled)

3. (Currently Amended) The apparatus according to claim 1, wherein the second portion is a hand.

4. (Cancelled)

5. (Previously Presented) The apparatus according to claim 1, wherein said second sensor detects a location and orientation of the second portion.

6-7. (Cancelled)

8. (Previously Presented) The apparatus according to claim 1, wherein the action information includes information which pertains to an orientation of the second portion with respect to the orientation of the first portion.

9. (Previously Presented) The apparatus according to claim 1, wherein the action information includes information which pertains to a moving direction of a location of the second portion with respect to the orientation of the first portion.

10. (Original) The apparatus according to claim 1, further comprising:
means for storing a value of the relative position of the second portion with respect to the first portion, and a plurality of state values which are defined in advance as a result of transition of the value; and

means for storing a plurality of different user instruction values corresponding to the plurality of state values.

11. (Previously Presented) The apparatus according to claim 1, wherein said determination unit decomposes the determined user instruction into a plurality of instruction operands, and outputs the operands.

12. (Cancelled)

13. (Original) The apparatus according to claim 1, further comprising a third sensor for detecting a bent angle of a finger.

14-15. (Cancelled)

16. (Previously Presented) The apparatus according to claim 1, further comprising a head-mounted display for displaying the image generated by said image generating unit.

17. (Cancelled)

18. (Currently Amended) A user interface method for outputting a user instruction to a predetermined apparatus or program, comprising:

a step of detecting a location of a ~~first portion of a body~~ head of a user and a location of a second portion of the user, which is different from the ~~first portion~~ head, by using ~~first and second~~ sensors attached to the user, wherein the first portion is a head and a first sensor attached to the head and a second sensor attached to the second portion, wherein the first sensor detects a position and an orientation of the head;

a step of estimating a relative position of the second portion with respect to the position and orientation of the ~~first portion~~ head in accordance with results of detection by the first and second sensors in said detecting step, wherein said estimating step determines the relative position by transforming coordinates between a head coordinate system that is based on the position and orientation of the head detected by the first sensor and another coordinate system that is based on information detected by the second sensor;

a step of generating action command information on the basis of a transition of the estimated relative position; and

a step of determining an instruction by the user corresponding to the generated action command information and outputting the determined user instruction to the apparatus or program.

19-28. (Cancelled)

29. (Currently Amended) A computer readable storage medium, which stores a program for controlling an apparatus to output a user instruction to a predetermined apparatus or program, the stored program comprising:

a program step of detecting a location of a first portion of a body head of a user and a location of a second portion of the user, which is different from the first portion head, by using ~~first and second sensors attached to the user, where the first portion is a head and a first sensor attached to the head and a second sensor attached to the second portion,~~ wherein the first sensor detects a position and an orientation of the head;

a program step of estimating a relative position of the second portion with respect to the position and orientation of the first portion head in accordance with results of detection by the first and second sensors in said program step of detecting, wherein said estimating step determines the relative position by transforming coordinates between a head coordinate system that is based on the position and orientation of the head detected by the first sensor and another coordinate system that is based on information detected by the second sensor;

a program step of generating action command information on the basis of a transition of the estimated relative position; and

a program step of determining an instruction by the user corresponding to the generated action command information and outputting the determined user instruction to the predetermined apparatus or program.

30-58. (Cancelled)